

ABSTRACT OF THE DISCLOSURE

Liquid raising systems raise liquid from a system inlet to a system outlet without any moving parts below the system outlet. One or more closed cells are disposed at elevations between the system inlet and outlet. A liquid conduit leads from the bottom of each cell to the top of the next downstream cell. Gas pressure-differential between two next-adjacent cells causes liquid to flow through the liquid conduit to the next cell. The pressure-differential need be only enough to move the liquid between adjacent cells. The cells are cyclically filled and emptied by sequentially applying the gas at higher and lower pressures to adjacent cells, thus progressively moving liquid toward the system outlet. A cell can have a variety of shapes and sizes, so long as the cell gas inlet is above the liquid inlet, and the liquid outlet is below both the liquid inlet and the gas inlet.